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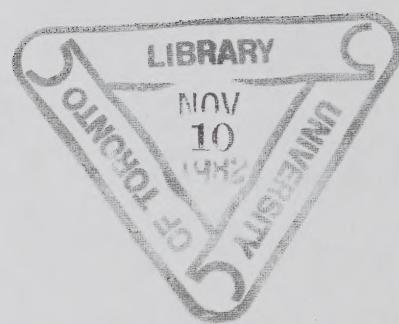
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Foreign Academics At Canadian Universities:
A Statistical Perspective
on New Appointments During the Seventies

December 10, 1981

Max von Zur-Muehlen, Ph.D.



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Foreword

This report examines the citizenship status of full-time teachers at Canadian universities, focusing particularly on faculty appointed between 1977-78 and 1980-81. Prepared primarily as background material for the forthcoming Third Volume of the Commission on Canadian Studies, the Statistical Series in this study attempt to provide a clear picture of the legal status of newly appointed full-time faculty.

The May 1981 announcement of the Minister of Employment and Immigration that universities must advertise for Canadian faculty before looking abroad might have significant consequences for staffing in 1982-83. The effect may be most pronounced in disciplines such as computer science, management and administrative studies, and selected areas of engineering, where severe shortages still exist. This study supplements a 200-page report containing time series from 1972-73 to 1980-81. Combined with data from Employment and Immigration Canada, these two reports could assist the federal and provincial governments and the university community with the development of staffing criteria and hiring procedures. It is beyond the scope of the report to ascertain the desirable composition of full-time university teachers.

As a note of caution, although precise figures are provided, only the trends and patterns indicated by these data are of significance. Since Statistics Canada data files for 1979-80 and 1980-81 were incomplete, the totals might vary in a number of instances. (For further information see note on Table 2). However, the percentage figures give an overview of the situation.

The assistance of the Post-secondary Section of the Education, Science and Culture Division of Statistics Canada, together with the clerical support of Mrs. Ruth Ingalls and her staff, is gratefully acknowledged. The help of Miss Jo-Anne Belliveau and Mrs. Ella Kealey was also of considerable value. Any errors and omissions are the responsibility of the author and not of Statistics Canada.

Max von Zur-Muehlen, Ph.D.
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Introduction

The foreign faculty problem is not a new one. In 1975, the Commission on Canadian Studies addressed the question,¹ and in 1977 the subject was discussed in The Issue of Foreign University Teachers at Canadian Universities.²

Manpower and Immigration announced in March of that year:

...persons seeking to come to Canada and to take appointments... must have an approved job offer in addition to meeting the normal immigration requirements. Institutions seeking to hire foreign faculty will also be obliged to demonstrate that the positions they intend to offer to persons who are not Canadian citizens or permanent residents of Canada are thoroughly advertised in Canada.

Since then, Canadian universities have tried to ensure that Canadian citizens and permanent residents who held that status before their appointment were given improved opportunities to obtain a full-time position. In May 1981, Lloyd Axworthy, Minister of Employment and Immigration (previously Manpower and Immigration) announced an even stricter policy:

Universities will be required to advertise for Canadian candidates and evaluate their suitability before seeking foreign academics for post-secondary teaching positions in Canada...

Although the present policy was designed to ensure that foreign academics were not admitted for teaching jobs until the vacancies had been brought to the attention of Canadian citizens and permanent residents, universities

¹ Symons, T.H.B., To Know Ourselves, The Report of the Commission on Canadian Studies, Volume I and II, Association of Universities and Colleges of Canada, 1975.

² von Zur Muehlen, Max, The Issue of Foreign University Teachers at Canadian Universities, Part III, Statistics Canada, Ottawa, May 1, 1977, p. 77.

were permitted to advertise for applicants from other countries at the same time as they were advertising in Canada. The decision to determine the availability of Canadians first will strengthen our policy of ensuring that people already living in Canada have a chance to compete for these jobs before anyone from abroad is considered. (Press Statement, May 7, 1981). *

This report gives a statistical picture of university staffing since the 1977 announcement. Data are provided on the geographic origin of first degree, citizenship, and legal status of full-time university teachers. The information is broken down by academic rank, combining full and associate professors, and assistant professors and instructors (or lecturers). The tables in Appendix A present more details on citizenship, legal status and previous employment by teaching field and academic rank.

The number of Ph.D.'s granted from Canadian universities during the seventies and projections for the eighties are provided. An example of the demand/supply situation and implications for hiring is given in Appendix B for management and administrative studies.

* This policy initiative has been clarified and amended in the Fall of 1981: (among others)

There may be instances where a distinguished person of international renown in his area of specialization is sought by a university. Regions may exempt such cases from any advertising requirements.

A new category of exceptions from the "two-tier" advertising processing is being developed. That is, faculties or disciplines where the one-tier or simultaneous advertising requirement will continue to apply. This will be based on an assessment of shortages of qualified Canadians.

The first entry into this category is: Schools of Administration and Management Studies. Immigration may continue to exercise discretion when the proposed appointment is at a senior level, or when it is known that there is a shortage of persons in a particular discipline with the required background and experience and two separate recruitment efforts would hamper the identification of a suitable candidate.

Foreign Academics

The place where university teachers earned the first degree is a reasonably accurate indicator of their origin. By 1977-78, more than half (58%) of all full-time faculty had obtained their degree in Canada (Table 1). This percentage varied by field from highs of 70% in education and 67% in the health sciences, to a low of 45% in fine and applied arts; for the humanities, and mathematics and physical sciences, the percentage was 53%, for the social sciences, 56%; for engineering and applied sciences, 58%; and for agriculture and the biological sciences, 61%. Overall slightly more than one-quarter (28%) had received their first degree in the United States or the United Kingdom, with 14% from all other countries. These figures varied considerably by discipline. For example, in some of the human sciences (classics, modern languages, philosophy, geography, sociology and anthropology), fewer than half the full-time teachers had obtained their first degree in Canada.

Table 2 shows where faculty appointed between 1972-73 and 1980-81 had obtained their first degree. The percentage who had done so in Canada rose about four percentage points to 59.4% in 1977-78 but the next year it jumped to 64.3%, and there appears to be a continuing upward trend.

An examination of the citizenship of full-time university teachers reveals that in 1977-78, almost three-quarters (74%) were Canadian citizens (Table 3). Eighty-one per cent of the faculty in education, the health sciences and engineering held Canadian citizenship, whereas for fine and applied arts, the percentage was 64%. In the other teaching fields, the percentage ranged from 70% to 75%.

Between 1973-74 and 1980-81, two-thirds of the new appointees were Canadian citizens (Table 4).³ This proportion had increased from 59% in 1972-73 to 74% in 1978-79. The percentage of newly appointed faculty with U.S. and U.K.

³It should be noted that data for 1979-80 and 1980-81 are incomplete.

Table 1
Geographic Area of First Degree of Full-time University Teachers by Teaching Field, 1977-78

Teaching field	Canada	United States	United Kingdom	Other Commonwealth	France and Belgium	Other Europe	Other	Sub-total	Not reported	Total
Education	2,251 (70.6)	546 (17.1)	162 (5.1)	75 (2.4)	61 (1.9)	47 (1.5)	48 (1.5)	3,190 (100.0)	64	3,254
Fine and applied arts	523 (44.9)	415 (35.6)	112 (9.6)	14 (1.2)	20 (1.7)	57 (4.9)	24 (2.1)	1,165 (100.0)	157	1,322
Humanities	3,054 (53.1)	1,261 (21.9)	649 (11.3)	77 (1.3)	262 (4.6)	308 (5.4)	137 (2.4)	5,748 (100.0)	58	5,806
Social sciences	4,415 (55.8)	1,781 (22.5)	635 (8.0)	291 (3.7)	248 (3.1)	254 (3.2)	284 (3.6)	7,908 (100.0)	83	7,991
Sub-total - Human sciences	10,243 (56.9)	4,003 (22.2)	1,558 (8.6)	457 (2.5)	591 (3.3)	666 (3.7)	493 (2.7)	18,011 (100.0)	362	18,373
Agriculture & bio. sciences	1,423 (61.1)	371 (15.9)	262 (11.2)	92 (4.0)	35 (1.5)	80 (3.4)	68 (2.9)	2,331 (100.0)	16	2,347
Engineering & applied sciences	1,359 (57.9)	175 (7.5)	298 (12.7)	131 (5.6)	63 (2.7)	181 (7.7)	140 (6.0)	2,347 (100.0)	30	2,377
Health sciences	2,965 (66.6)	332 (7.5)	549 (12.3)	153 (3.4)	51 (1.7)	219 (4.9)	185 (4.2)	4,454 (100.0)	41	4,495
Mathematics & phys. sciences	2,237 (52.9)	530 (12.5)	618 (14.6)	275 (6.5)	89 (2.1)	272 (6.4)	206 (4.9)	4,227 (100.0)	45	4,272
Sub-total - Sciences	7,984 (59.8)	1,408 (10.5)	1,727 (12.9)	651 (4.9)	238 (1.8)	752 (5.6)	599 (4.5)	13,359 (100.0)	132	13,491
Total	18,227 (58.1)	5,411 (17.3)	3,285 (10.5)	1,108 (3.5)	829 (2.6)	1,418 (4.5)	1,092 (3.5)	31,370 (100.0)	494	31,864
Specialization Not reported	179 (64.4)	35 (12.6)	33 (11.9)	9 (3.2)	5 (1.8)	10 (3.6)	7 (2.5)	278 (100.0)	25	303
Grand Total	18,406 (58.2)	5,446 (17.2)	3,318 (10.5)	1,117 (3.5)	834 (2.6)	1,428 (4.5)	1,099 (3.5)	31,648 (100.0)	519	32,167

Year	Canada	United States	United Kingdom	Other Commonwealth	France/Belgium	Other Europe	Other	Sub-total	Not Reported	Total
1972-73	1,441 (55.7)	540 (20.9)	241 (9.3)	87 (3.4)	89 (3.4)	95 (3.7)	94 (3.6)	2,587 (100.0)	115	2,702
1973-74	1,397 (59.2)	463 (19.6)	192 (8.1)	85 (3.6)	55 (2.3)	91 (3.9)	75 (3.2)	2,358 (100.0)	66	2,424
1974-75	1,577 (57.4)	587 (21.4)	254 (9.2)	80 (2.9)	61 (2.2)	92 (3.4)	95 (3.5)	2,746 (100.0)	104	2,850
1975-76	1,498 (57.5)	553 (21.2)	214 (8.2)	95 (3.6)	71 (2.7)	92 (3.5)	83 (3.2)	2,606 (100.0)	95	2,701
1976-77	1,426 (57.2)	474 (19.0)	223 (8.9)	103 (4.1)	64 (2.6)	92 (3.7)	112 (4.5)	2,494 (100.0)	96	2,590
1977-78	1,455 (59.4)	431 (17.6)	215 (8.8)	83 (3.4)	67 (2.7)	91 (3.7)	107 (4.4)	2,449 (100.0)	98	2,547
1978-79	1,472 (64.3)	323 (14.1)	179 (7.8)	87 (3.8)	54 (2.3)	84 (3.8)	89 (3.9)	2,288 (100.0)	112	2,400
1979-80*	1,142 (60.6)	286 (15.2)	179 (9.5)	85 (4.5)	37 (2.0)	69 (3.6)	87 (4.6)	1,885 (100.0)	84	1,969
1980-81*	962 (60.8)	271 (17.1)	124 (7.9)	73 (4.6)	13 (0.8)	49 (3.1)	90 (5.7)	1,582 (100.0)	100	1,682
9 Year Total	12,370 (58.9)	3,928 (18.7)	1,821 (8.7)	778 (3.7)	511 (2.4)	755 (3.6)	832 (4.0)	20,995 (100.0)	870	21,869

* For all tables, the data for 1979-80 and 1980-81 are incomplete. Excluded in 1979-80 are 3 major Quebec universities and 6 smaller, degree granting colleges; excluded in 1980-81 are 4 Nova Scotia institutions, all Quebec institutions, 1 major Ontario institution, and 8 smaller degree granting colleges.

Table 3

Citizenship of Full-time University Teachers by Teaching Field, 1977-78

Teaching Field	Canada	United States	United Kingdom	Other Commonwealth	Belgium/ France	Other Europe	Other	Total Reported	Not Reported	Total
Education	2,589 (80.8)	369 (11.5)	100 (3.1)	51 (1.6)	40 (1.2)	26 (0.8)	28 (0.9)	3,203 (100.0)	24	3,227
Fine and Applied Arts	829 (64.0)	312 (24.1)	82 (6.3)	14 (1.1)	12 (0.9)	34 (2.6)	13 (1.0)	1,296 (100.0)	10	1,306
Humanities	4,068 (70.9)	943 (16.4)	350 (6.1)	62 (1.1)	125 (2.2)	136 (2.4)	57 (1.0)	5,741 (100.0)	21	5,762
Social Sciences	5,461 (69.9)	1,334 (17.1)	356 (4.6)	186 (2.4)	158 (2.0)	140 (1.8)	174 (2.2)	7,809 (100.0)	54	7,863
Agriculture and Biological Sciences	1,751 (75.1)	319 (13.6)	134 (5.8)	43 (1.8)	22 (0.9)	33 (1.4)	30 (1.3)	2,332 (100.0)	10	2,342
Engineering	1,848 (80.7)	121 (5.3)	108 (4.7)	64 (2.8)	42 (1.8)	61 (2.7)	47 (2.0)	2,291 (100.0)	73	2,364
Health Sciences	3,616 (80.8)	263 (5.9)	321 (7.2)	100 (2.2)	30 (0.7)	70 (1.6)	75 (1.7)	4,475 (100.0)	10	4,485
Mathematics and Physical Sciences	3,082 (73.3)	429 (10.2)	299 (7.1)	125 (3.0)	56 (1.3)	134 (3.2)	82 (2.0)	4,207 (100.0)	30	4,237
Sub-total	23,244 (74.1)	4,090 (13.0)	1,750 (5.6)	645 (2.1)	485 (1.6)	634 (2.0)	506 (1.6)	31,354 (100.0)	232	31,586
Other	348	87	59	17	10	21	16	558	23	581
TOTAL	23,592 (73.9)	4,177 (13.1)	1,809 (5.7)	662 (2.1)	495 (1.6)	655 (2.0)	522 (1.6)	31,912 (100.0)	255	32,167

Year of appointment	Canada	United States	United Kingdom	Other Commonwealth	France & Belgium	Other Europe	Other Countries	Sub-Total	Not Reported	Total	Total* Faculty
1972-73	1,094	332	165	69	56	66	68	456	2,306	27,903	(8.3)
	59.1	17.9	8.9	3.7	3.0	3.6	3.7	100.0	187	1,937	28,458
1973-74	1,108	296	134	63	31	67	51	1,750	187	1,937	(6.8)
	63.3	16.9	7.7	3.6	1.8	3.8	2.9	100.0	203	2,254	29,710
1974-75	1,280	361	177	64	43	57	69	2,051	134	2,148	30,784
	62.4	17.6	8.6	3.1	2.1	2.8	3.4	100.0	18	2,162	(7.0)
1975-76	1,293	325	144	78	40	62	72	2,014	51	2,106	31,648
	64.2	16.1	7.1	3.9	2.0	3.1	3.6	100.0	53	2,055	(6.8)
1976-77	1,399	319	154	87	44	57	84	2,144	18	2,162	32,181
	65.3	14.9	7.2	4.0	2.0	2.7	3.9	100.0	53	2,364	(6.5)
1977-78	1,422	273	148	56	41	48	67	2,055	51	2,400	32,645
	69.2	13.3	7.2	2.7	2.0	2.3	3.3	100.0	53	1,916	(7.4)
1978-79	1,743	250	153	63	37	56	62	2,364	53	1,969	32,890
	73.7	10.6	6.5	2.7	1.5	2.4	2.6	100.0	55	1,627	33,411
1979-80	1,380	209	134	64	22	49	58	1,00.0	55	1,682	33,411
	72.0	10.9	7.0	3.4	1.1	2.6	3.0	100.0	55	1,193	18,964
1980-81	1,165	214	95	48	8	35	62	100.0	55	1,193	18,964
	71.6	13.1	5.8	3.0	0.5	2.2	3.8				
Nine year total	11,884	2,579	1,304	592	322	497	593	17,771			
	66.9	14.5	7.3	3.3	1.8	2.8	3.4	100.0			

*Newly-appointed faculty expressed as a percentage of total faculty in brackets.

citizenship declined over the nine-year period, accounting for 27% in 1972-73, but 19% in 1980-81. (Tables A-1 to A-3 give citizenship by geographic area for new appointees in eight teaching fields, from 1978-79 to 1980-81.)

The legal status (Canadian citizen, permanent resident or employment permit-holder) of new appointments between 1977-78 and 1980-81 is given in Table 5. Over these four years there has been little change in the proportion of Canadians (around 75%).⁴ However, in this table, and in others dealing with legal status, permanent residents have to be divided into two groups:

- a) those residing in Canada before their appointment (long-standing permanent residents). Some of them might have been in the foreign student category. Others might have held an employment permit.
- b) those residing abroad before their appointment, i.e., who received "permanent resident" status in conjunction with their appointment. Included in this category are some permanent residents of Canada who lived abroad preceding their appointment.

Table 5 shows that 84% of new appointments were either Canadian citizens or long-standing permanent residents, and 9% received their permanent resident status upon appointment. Seven per cent were employment permit-holders, obliged by law to leave Canada upon completion of their term, and in many instances, were replacing Canadian faculty on educational or sabbatical leave.

Table 6 provides the legal status for the total four years (1977-78 to 1980-81) for newly appointed faculty by academic rank. Almost 75% of full professors were Canadian citizens or long-standing permanent residents, whereas the percentage for instructors and lecturers was 90%. (Appendix tables A-4 to A-7 provide the data separately for each year).

Table 7 gives the legal status of newly appointed faculty in the five regions of Canada (including a breakdown between English- and French-speaking Quebec universities) for the four-year period, 1977-78 to 1980-81. (Long-standing

⁴ In 1977-78 the figure was a low 71.3%, a year of major expansion in some universities, which therefore had to place greater reliance on foreign faculty. Moreover, the spring 1977 guidelines of Manpower and Immigration did not come into effect until the following academic year, 1978-79.

Table 5

Legal Status of Newly Appointed Full-time University Teachers, 1977-78 to 1980-81

	Canadian citizen	Permanent resident*	Sub-total	Permanent resident**	Employment permit	Total	Not reported	Grand Total
1977-78	1,743 (71.3)	250 (10.2)	1,993 (81.5)	250 (10.2)	203 (8.3)	2,446 (100.0)	139	2,585
1978-79	1,743 (76.0)	212 (9.3)	1,955 (85.3)	212 (9.3)	128 (5.5)	2,295 (100.0)	105	2,400
1979-80	1,537 (76.9)	168 (8.4)	1,705 (85.3)	167 (8.4)	128 (6.4)	2,000 (100.0)	181	2,181
1980-81	1,568 (77.6)	156 (7.7)	1,724 (85.3)	155 (7.7)	142 (7.0)	2,021 (100.0)	184	2,205
Total	6,591 (75.2)	786 (9.0)	7,377 (84.2)	784 (9.0)	601 (6.9)	8,762 (100.0)	609	9,371

Note: For Quebec universities, as well as for four other universities, 1979-80 data have been substituted for 1980-81.

*Estimate of permanent residents who resided in Canada prior to their university appointment.

**Estimate of permanent residents who obtained their status in conjunction with their university appointment.

Table 6

Legal Status of Newly Appointed Full-time University Teachers by Academic Rank, Four Year Total
(1977-78 to 1980-81)

	Canadian Citizen	Permanent Resident	Sub-total	Permanent Resident	Employment Permit	Total	Not Reported	Grand Total
Full Professor	307 (62.0)	52 (10.5)	359 (72.5)	52 (10.5)	84 (17.0)	495 (100.0)	74	569
Associate Professor	625 (66.4)	114 (12.1)	739 (78.5)	114 (12.1)	88 (9.4)	941 (100.0)	91	1,032
Sub-total	932 (64.9)	166 (11.6)	1,098 (76.5)	166 (11.6)	172 (12.0)	1,436 (100.0)	165	1,601
Assistant Professor	2,645 (72.8)	374 (10.3)	3,019 (83.1)	373 (10.3)	239 (6.6)	3,631 (100.0)	234	3,865
Instructor/2,173 Lecturer (83.3)	159 (6.1)	2,332 (89.4)	159 (6.1)	118 (4.5)	2,609 (100.0)	135	2,744	
Sub-total	4,818 (77.2)	533 (8.5)	5,351 (85.8)	532 (8.5)	357 (5.7)	6,240 (100.0)	369	6,609
Other	391 (74.0)	47 (8.9)	438 (83.0)	47 (8.9)	43 (8.1)	528 (100.0)	63	591
Total	6,141 (74.8)	746 (9.1)	6,887 (84.0)	745 (9.1)	572 (7.0)	8,204 (100.0)	597	8,801

*Estimate of permanent residents who resided in Canada prior to their university appointment.

**Estimate of permanent residents who obtained their status in conjunction with their university appointment.

Table 7

Legal Status of Newly Appointed Full-time University Teachers by Region, Four Year Total
(1977-78 to 1980-81)

Region	Canadian Citizen		Permanent Resident*		Sub-total		Permanent Resident**		Employ-ment		Not Reported		Grand Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Atlantic	894	73.6	118	9.7	1,012	83.4	116	9.6	86	7.1	202	16.6	1,214	100.0
Quebec English Speaking Universities	258	52.9	80	16.4	338	69.3	78	16.0	72	14.8	150	30.7	448	100.0
Quebec French Speaking Universities	1,197	88.3	63	4.6	1,260	92.9	62	4.6	34	2.5	96	7.1	1,356	100.0
Ontario	2,272	72.5	287	9.2	2,559	81.7	286	9.1	287	9.2	573	18.3	3,132	100.0
Western	1,922	68.0	317	11.2	2,239	79.2	315	11.1	274	9.7	589	20.8	2,828	100.0
Sub-total	6,543	72.6	865	9.6	7,408	82.2	857	9.5	753	8.4	1,610	17.9	9,018	100.0
Other Institutions	161	82.1	11	5.6	172	87.7	11	5.6	13	6.6	24	12.2	196	100.0
Total	6,704	72.8	876	9.5	7,580	82.3	868	9.4	766	8.3	1,634	17.7	9,214	100.0
													157	9,371

* Estimate of permanent residents who resided in Canada prior to their university appointment.

** Estimate of permanent residents who obtained this status in conjunction with their university appointment.

*** For many institutions, the "Not Reported" category has been reclassified into the four legal categories. As a result, the figures in this table differ from those in the other tables. Appendix Table A-15 provides additional information on the "Not Reported" category for five universities.

permanent residents are included with Canadian citizens.) For this group, only the English and French-speaking Quebec universities differ greatly from the national 82.3%, with 69.3% and 92.9% respectively. It should be emphasized that these percentages varied over the four years by region and even more so by institution (see Appendix Table A-8 for each year separately).

The percentage of newly appointed faculty who were Canadian citizens or long-standing permanent residents was 85% for the three year period, 1978-79 to 1980-81, with a high of 91% in education and the health sciences, and a low of 80% in engineering and applied sciences (Table 8). (Appendix Table A-9 provides the information for each of the three years separately by field of study.) There is substantial variation by discipline, as shown in table A-10, which gives the legal status of newly appointed faculty for 15 individual disciplines for the four year period, 1977-78 to 1980-81.

Table 9 shows the country of previous employment of full-time university teachers hired from 1977-78 to 1980-81. About half the permanent residents were living in Canada before their university appointment and have been included in the "Canadian citizen" category. More than half of those who had been residing abroad were in the United States (Appendix Table A-11 to A-14 provide the information separately for each year).

Table 10 gives four-year totals (1977-78 to 1980-81) of the country of previous employment and legal status for appointees to the senior ranks (full and associate professors) and junior ranks (assistant professor, and instructors and lecturers). Overall, four out of five new appointments were to the junior ranks. Twenty-four per cent of those who received their permanent resident status in conjunction with their university appointment were in the senior ranks; for those holding employment permits, this percentage was 32%. An average of half the new appointments in the "permanent resident" and "employment permit" categories were from the United States. In summary, the percentage of foreign faculty appointed is higher at the senior than the junior ranks. This seems to indicate a lack of qualified Canadians with sufficient teaching and research experience, and the present need to hire from abroad.

	Canadian Citizen	Permanent* Resident	Sub-total	Permanent** Resident		Employment Permit	Total
				33	(6.3)		
Education	443 (84.7)	33 (6.3)	476 (91.0)	33	(6.3)	14 (2.7)	523 (100.0)
Fine and Applied Arts	237 (70.1)	38 (11.2)	275 (81.4)	38 (11.2)		25 (7.4)	338 (100.0)
Humanities	568 (78.8)	58 (8.0)	626 (86.8)	57 (7.9)		38 (5.3)	721 (100.0)
Social Sciences	1,231 (74.8)	145 (8.8)	1,376 (83.6)	145 (8.8)		124 (7.5)	1,645 (100.0)
Agriculture and Biological Sciences	174 (71.3)	29 (11.9)	203 (83.2)	28 (11.5)		13 (5.3)	244 (100.0)
Engineering and Applied Sc.	258 (71.7)	31 (8.6)	289 (80.3)	31 (8.6)		40 (11.1)	360 (100.0)
Health Sciences	329 (84.4)	25 (6.4)	354 (90.8)	25 (6.4)		11 (2.8)	390 (100.0)
Mathematics and Physical Sciences	279 (76.6)	22 (6.0)	301 (82.7)	21 (5.8)		42 (11.5)	364 (100.0)
Sub-total	3,519 (76.8)	380 (8.3)	3,899 (85.0)	379 (8.3)		307 (6.7)	4,585 (100.0)
Not Specified	769 (75.6)	99 (9.7)	868 (85.4)	98 (9.6)		51 (5.0)	1,017 (100.0)
Total	4,288 (76.5)	478 (8.5)	4,766 (85.1)	478 (8.5)		358 (6.4)	5,602 (100.0)

* Estimate of permanent residents who resided in Canada prior to their university appointment.

** Estimate of permanent residents who obtained this status in conjunction with their university appointment.

Table 9

Country of Previous Employment of Newly Appointed Full-time University Teachers
by Legal Status, Four Year Total
(1977-78 to 1980-81)

Country	Canadian Citizen		Permanent Resident		Employment Permit		Sub-total		Not Reported	Total
	No.	%	No.	%	No.	%	No.	%		
Canada	5,614	98.1	*		109	1.9	5,723	100.0	103	5,826
United States	499	46.3	400	37.1	179	16.6	1,078	100.0	148	1,226
United Kingdom	91	30.7	111	37.5	94	31.8	296	100.0	58	354
Other Commonwealth	41	39.8	34	33.0	28	27.2	103	100.0	21	124
Belgium/France	47	58.0	17	21.0	17	21.0	81	100.0	10	91
Other Europe	37	34.9	32	30.2	37	34.9	106	100.0	20	126
Other	35	31.0	45	39.8	33	29.2	113	100.0	21	134
Sub-total	6,364	84.8	639	8.5	497	6.6	7,500	100.0	381	7,881
Not Reported	502		127		75		704		216	920
Total	6,866		766		572		8,204		597	8,801

* This group has been included in the "Canadian Citizen" category, because they were residing in Canada prior to their university appointment.

Note: Figures in brackets indicate the percentage distribution among countries of previous residence. Since information on an estimated 570 full-time university teachers, was not available, the total differs from other tables.

Table 1)

Legal Status and Country of Previous Employment of Newly Appointed Full-time University Teachers by Senior and Junior Academic Rank, Four Year Total (1977-78 to 1980-81)

Rank	Canada		United States		United Kingdom		Other Commonwealth		Belgium/France		Other Europe		Other		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Canadian																
Senior	870	16.3	85	17.3	10	11.4	15	38.5	4	8.5	7	18.9	11	32.4	1,002	16.5
Junior	4,774	83.7	407	83.7	78	88.6	24	61.5	43	91.5	30	81.1	23	67.6	5,084	93.5
Total	5,349	100.0	492	100.0	88	100.0	39	100.0	47	100.0	37	100.0	34	100.0	6,086	100.0
permanent resident																
Senior	—	0.0	104	26.4	48	44.0	13	39.4	4	23.5	12	38.7	18	48.9	799	23.9
Junior	—	0.0	290	73.6	61	56.0	20	60.6	13	76.5	19	61.3	26	59.1	429	76.1
Total	—	0.0	394	100.0	109	100.0	33	100.0	17	100.0	31	100.0	44	100.0	628	100.0
Employment																
Senior	7	6.8	46	25.8	60	66.7	9	34.6	2	11.8	13	36.1	16	51.6	153	31.8
Junior	96	93.2	132	74.2	30	33.3	17	65.4	15	88.2	23	63.9	15	48.4	328	68.2
Total	103	100.0	178	100.0	90	100.0	26	100.0	17	100.0	36	100.0	31	100.0	481	100.0
Total																
Senior	877	16.1	735	22.1	118	41.1	37	37.8	10	12.4	32	30.8	45	41.3	1,354	18.8
Junior	4,575	83.9	829	97.9	169	58.9	61	62.2	71	87.6	72	69.2	64	58.7	5,841	81.2
Total	5,452	100.0	1,054	100.0	87	100.0	58	100.0	81	100.0	104	100.0	109	100.0	7,195	100.0

Note: Senior ranks — full and associate professors

Junior ranks — assistant professor, and instructors and lecturers.

Table 11

Earned Doctoral Degrees by Field of Study and Selected Disciplines, 1969-70 to 1979.

	1969-70	1970-71	1971-72	1972-73	1974	1975	1976	1977	1978	1979
	No.	No. Index	No. Index	No. Index						
Education	78	77	100	109	142	122	158	128	166	172
Fine and Applied Arts	3	6	100	6	100	5	83	4	67	2
Classics	4	3	100	14	467	7	233	7	233	10
English	50	49	100	48	98	64	128	66	132	79
French	15	18	100	20	111	21	117	25	139	27
Other Languages and Literature	22	28	100	17	61	23	82	42	150	32
History	29	36	100	49	136	35	97	47	131	61
Philosophy	22	34	100	31	91	43	126	50	147	44
Religious Studies	12	14	100	23	164	35	250	25	179	25
Other Humanities	-	-	-	-	-	-	-	2	-	1
Sub-total Humanities	154	182	100	202	111	228	125	264	145	277
Anthropology (incl. Archaeology)	6	7	100	4	57	10	143	15	214	9
Management and Admin. Studies	1	4	100	6	150	10	250	19	475	12
Economics	14	24	100	21	88	39	162	39	162	52
Geography	14	18	100	22	122	24	133	31	172	39
Law	3	15	100	10	67	5	33	4	27	7
Political Sciences	7	9	100	16	178	20	222	19	211	20
Psychology	86	119	100	109	92	121	102	133	112	148
Social Work	2	1	100	1	100	6	600	1	100	7
Sociology	6	9	100	15	166	23	255	31	144	41
Other Social Sciences	27	30	100	27	117	32	139	42	183	30
Sub-total Social Sciences	166	229	100	231	101	290	127	325	142	372
Agriculture	67	46	100	52	113	64	139	49	107	39
Biology, Botany, and Zoology	126	152	100	159	105	149	98	152	100	159
Other Biological Sciences	42	38	100	29	76	37	97	46	121	43
Sub-total Agriculture & Biological Sciences	235	236	100	240	102	250	106	247	105	241
Engineering	188	225	100	261	116	299	133	301	134	227
Health Sciences	95	142	100	151	106	178	125	153	108	122
Mathematics	61	85	100	97	114	113	133	101	118	92
Chemistry	209	241	100	221	92	225	93	200	83	167
Geology	37	38	100	43	113	39	102	30	79	34
Physics	123	136	100	132	97	150	110	129	95	108
Other Mathematics & Physical Sciences	6	28	100	31	111	30	107	14	50	21
Sub-total Mathematics & Physical Sciences	456	528	100	524	99	557	105	474	90	422
Total	1,375	1,625	100	1,724	106	1,929	119	1,896	117	1,840

Table 12

Projected Supply of Ph.D.'s by Field of Study
and Selected Disciplines, 1981 to 1985

	1979-80 Enrolment	Withdrawal Rate in %	Balance	Length of Study in Years	Degrees Granted Each Year 1981-1985
<u>Humanities</u>	<u>1,334</u>	<u>50</u>	<u>667</u>	<u>4</u>	<u>167</u>
and Applied Arts	101	60	40	4	10
ics	66	30	46	4	11
sh	513	55	231	4	58
h	263	55	118	4	30
Languages and erature	395	55	178	5	36
ry	385	40	231	4	58
sophy	338	45	186	4	46
ious Studies	192	45	106	4	26
Humanities	38	45	21	4	5
<u>Total Humanities</u>	<u>2,190</u>	<u>51</u>	<u>1,117</u>	<u>4</u>	<u>279</u>
opology (incl.					
haeology	200	50	100	4	25
ement and Admin. Studies	156	50	78	4	20
mics	386	50	193	4	48
aphy	139	40	83	4	21
	35	50	18	4	4
ical Science	239	55	108	4	27
iology	1,081	50	541	4	135
l Work	51	50	26	4	6
iology	373	55	168	4	42
Social Sciences	119	50	60	4	15
<u>Total Social Sciences</u>	<u>2,779</u>	<u>50</u>	<u>1,375</u>	<u>4</u>	<u>344</u>
<u>Human Sciences</u>	<u>6,404</u>	<u>50</u>	<u>3,199</u>	<u>4</u>	<u>799</u>
culture	151	25	113	3	37
ogy, Botany and					
ology	576	40	346	3	115
er Biological Sciences	115	20	92	3	31
<u>Total Agriculture &</u>					
<u>logical Sciences</u>	<u>842</u>	<u>35</u>	<u>551</u>	<u>3</u>	<u>187</u>
<u>Engineering</u>	<u>724</u>	<u>45</u>	<u>398</u>	<u>3</u>	<u>133</u>
<u>th Sciences</u>	<u>669</u>	<u>30</u>	<u>468</u>	<u>4</u>	<u>117</u>
ematics	333	30	233	3	77
istry	412	30	288	3	96
ogy	174	45	96	3	32
ics	351	35	228	3	76
er Mathematics &					
ysical Sciences	39	35	25	3	8
<u>Total Mathematics &</u>					
<u>ysical Sciences</u>	<u>1,309</u>	<u>35</u>	<u>870</u>	<u>3</u>	<u>289</u>
<u>Sciences</u>	<u>3,544</u>	<u>35</u>	<u>2,287</u>	<u>3</u>	<u>762</u>
	9,948	45	5,486	3.6	1,527

Excluding foreign students.

A doctorate is usually a prerequisite for a tenure stream appointment in the traditional teaching disciplines. University teaching is one of the primary occupational destinations of Ph.D. recipients. Thus, to some extent, the number of Canadian professors is determined by the number of Canadians who earn Ph.D.'s.⁵

For the period 1968-70 to 1979, Table 11 gives the number of earned doctorates by field of study as well as by selected disciplines. Although the figure has remained around 1,800 since 1974, the human sciences increased their share from 33% in 1971-72 to about 50% in 1979, with the sciences declining proportionately. There appears to be a mismatch between the demand and supply of faculty, such as computer science, management and administrative studies, and certain areas of engineering, which are suffering from faculty shortages.

Table 12 projects the annual average number of Ph.D.'s for the next five years. If demand follows the same pattern, and if other factors, such as the Ph.D. prerequisite, remain constant, shortages will likely continue in the above mentioned disciplines.

⁵ This study does not attempt to do a detailed comparison of supply data and anticipated demand. This must be done by individual discipline as there are various factors such as substitutability, which have to be considered. However, as an example, Appendix B discusses the faculty supply/demand situation in management and administrative studies (commerce and business administration.) (The author has addressed the question of Ph.D. supply and demand imbalances in three earlier studies: "The Ph.D. Dilemma in Canada: A Case Study", Canadian Higher Education in the Seventies, Economic Council of Canada, 1972, pp. 75-131, and "The Ph.D. Dilemma Canada Revisited", The Canadian Journal of Higher Education, February 1, 1978, pp. 49-92; Doctoral Enrolment and Graduation Patterns at Canadian Universities During the Seventies and Their Implications for the Eighties: A Statistical Documentation by Discipline (April 6, 1981).

Teachers by Teaching Field, 1978-79

	Canada	U.S.	U.K.	Other Common- wealth	Belgium/ France	Other Europe	Other	Sub- total	N.R.	Total
Education	185 80.1	27 11.7	11 4.8	4 1.7	2 0.9	1 0.4	1 0.4	231 100.0	2	233
Fine and Applied Arts	107 69.0	27 17.4	11 7.1	0 0.0	2 1.3	7 4.5	1 0.7	155 100.0	2	157
Humanities	234 76.2	36 11.7	10 3.3	2 0.6	11 3.6	8 2.6	6 2.0	307 100.0	3	310
Social Sciences	572 74.2	75 9.7	39 5.0	29 3.8	14 1.8	16 2.1	26 3.4	771 100.0	7	778
Sub-total Human Sciences	1,098 75.0	165 11.3	71 4.8	35 2.4	29 2.0	32 2.2	34 2.3	1,464 100.0	14	1,478
Agriculture and Biological Sciences	73 65.2	22 19.6	8 7.1	3 2.7	0 0.0	2 1.8	4 3.6	112 100.0	3	115
Engineering and Applied Sciences	87 69.6	9 7.2	14 11.2	5 4.0	1 0.8	3 2.4	6 4.8	125 100.0	2	127
Health Sciences	294 75.6	30 7.7	38 9.8	8 2.1	4 1.0	8 2.0	7 1.8	389 100.0	3	392
Mathematics and Physical Sciences	161 70.3	18 7.9	19 8.3	10 4.4	2 0.9	9 3.9	10 4.3	229 100.0	0	229
Sub-total Sciences	615 72.0	79 9.2	79 9.2	26 3.0	7 0.8	22 2.6	27 3.2	855 100.0	8	863
Specialization Not Reported	30 66.7	6 13.3	3 6.7	2 4.5	1 2.2	2 4.4	1 2.2	45 100.0	14	59
Total	1,743 73.7	250 10.6	153 6.5	63 2.6	37 1.6	56 2.4	62 2.6	2,364 100.0	36	2,400

Table A-2

Citizenship of Newly Appointed Full-time University Teachers by Teaching Field, 1979-80

	Canada	U.S.	U.K.	Other Common- Wealth Europe	Belgium/ France	Other	Sub-total	N.R.	Total
Education	151 87.3	16 9.2	3 1.7	1 0.6	0 0.0	1 0.6	1 0.6	173 100.0	2 175
Fine and Applied Arts	64 62.7	20 19.6	12 11.8	1 1.0	0 0.0	4 3.9	1 1.0	102 100.0	1 103
Humanities	185 72.5	36 14.1	14 5.5	4 1.6	5 2.0	5 2.0	6 2.3	255 100.0	2 257
Social Sciences	410 68.0	80 13.3	45 7.4	23 3.8	10 1.7	12 2.0	23 3.8	603 100.0	7 610
Sub-total Human Sciences	810 71.5	152 13.4	74 6.5	29 2.6	15 1.3	22 2.0	31 2.7	1,133 100.0	12 1,145
Agriculture and Biological Sciences	75 71.4	11 10.5	7 6.7	2 1.9	0 0.0	7 6.7	3 2.8	105 100.0	3 108
Engineering and Applied Sciences	90 69.8	2 1.5	7 5.4	13 10.1	1 0.8	7 5.4	9 7.0	129 100.0	4 133
Health Sciences	239 77.1	23 7.4	28 9.0	6 2.0	2 0.6	5 1.6	7 2.3	310 100.0	3 313
Mathematics and Physical Sciences	138 67.6	19 9.3	16 7.9	13 6.4	3 1.5	8 3.9	7 3.4	204 100.0	13 217
Sub-total Sciences	542 72.5	55 7.3	58 7.8	34 4.5	6 0.8	27 3.6	26 3.5	748 100.0	23 771
Specialization Not Reported	28 80.0	2 5.7	2 5.7	1 2.9	1 2.9	0 0.0	1 2.8	35 100.0	18 53
Total	1,380 72.0	209 10.9	134 7.0	64 3.4	22 3.4	49 1.1	58 2.6	1,916 3.0	53 1,969

	Canada	U.S.	U.K.	Common- wealth	Other Europe	Belgium/ France	Other Europe	Sub- total	N.R.	Total
Education	107 79.9	16 12.0	9 6.7	0 0.0	0 0.0	1 0.7	1 0.7	134 100.0	4	138
Fine and Applied Arts	66 64.1	27 26.2	7 6.8	0 0.0	0 0.0	1 1.0	2 1.9	103 100.0	1	104
Humanities	182 78.4	30 12.9	7 3.0	2 0.9	3 1.3	3 1.3	5 2.2	232 100.0	6	238
Social Sciences	317 69.2	70 15.3	30 6.6	11 2.4	2 0.4	7 1.5	21 4.6	458 100.0	11	469
Sub-total Human Sciences	672 72.5	143 15.4	53 5.7	13 1.4	5 0.6	12 1.3	29 3.1	927 100.0	22	949
Agriculture and Biological Sciences	52 69.4	13 17.3	4 5.3	6 8.0	0 0.0	0 0.0	0 0.0	75 100.0	1	76
Engineering and Applied Sciences	83 67.5	7 5.7	4 3.3	10 8.1	0 0.0	8 6.5	11 8.9	123 100.0	5	128
Health Sciences	224 74.7	29 9.7	19 6.3	10 3.3	0 0.0	7 2.3	11 3.7	300 100.0	9	309
Mathematics and Physical Sciences	109 66.1	14 8.5	15 9.1	8 4.8	3 1.8	7 4.2	9 5.5	165 100.0	10	175
Sub-total Sciences	468 70.6	63 9.5	42 6.3	34 5.1	3 0.5	22 3.3	31 4.7	663 100.0	25	688
Specialization Not Reported	25 67.6	8 21.6	0 0.0	1 2.7	0 0.0	1 2.7	2 5.4	37 100.0	8	45
Total	1,165 71.6	214 13.2	95 5.8	48 2.9	8 0.5	35 2.2	62 3.8	1,627 100.0	55	1,682

Table A-4

Legal Status of Newly Appointed Full-time University Teachers by Academic Rank, 1977-78

Rank	Canadian citizen	Permanent resident*	Sub-total	Permanent resident**	Employment permit	Total	Not reported	Grand total
Full professor	91 (57.2)	17 (10.7)	108 (67.9)	16 (10.1)	35 (22.0)	159 (100.0)	13	172
Associate professor	180 (63.2)	40 (14.0)	220 (77.2)	39 (13.7)	26 (9.1)	285 (100.0)	22	307
Sub-total	271 (61.0)	56 (12.6)	327 (73.6)	56 (12.6)	61 (13.8)	444 (100.0)	35	479
Assistant professor	762 (69.3)	127 (11.6)	889 (80.8)	127 (11.6)	84 (7.6)	1,100 (100.0)	62	1,162
Instructor / Lecturer	626 (80.9)	50 (6.5)	676 (87.3)	50 (6.5)	48 (6.2)	774 (100.0)	41	815
Sub-total	1,388 (74.1)	177 (9.4)	1,565 (83.5)	177 (9.4)	132 (7.0)	1,874 (100.0)	103	1,977
Other	84 (65.6)	17 (13.3)	101 (78.9)	17 (13.3)	10 (7.8)	128 (100.0)	1	129
Total	1,743 (71.3)	250 (10.2)	1,993 (81.5)	250 (10.2)	203 (8.3)	2,446 (100.0)	139	2,585

*Estimate of permanent residents who resided in Canada prior to their university appointment.

**Estimate of permanent residents who obtained their status in conjunction with their university appointment.

Table A-5

Legal Status of Newly Appointed Full-time University Teachers by Academic Rank, 1978-79

Rank	Canadian citizen	Permanent resident*	Sub-total	Permanent resident**	Employment permit	Total	Not reported	Total
Full professor	84 (62.2)	16 (11.9)	100 (74.1)	15 (11.1)	20 (14.8)	135 (100.0)	10	145
Associate professor	182 (68.4)	31 (11.7)	213 (80.1)	31 (11.7)	22 (8.3)	266 (100.0)	13	279
Sub-total	266 (66.3)	47 (11.7)	313 (78.0)	46 (11.5)	42 (10.5)	401 (100.0)	23	424
Assistant professor	747 (74.5)	105 (10.5)	852 (85.0)	105 (10.5)	45 (4.5)	1,002 (100.0)	39	1,041
Instructor/lecturer	603 (83.1)	48 (6.6)	651 (89.7)	48 (6.6)	27 (3.7)	726 (100.0)	25	751
Sub-total	1,350 (78.1)	153 (8.9)	1,503 (87.0)	153 (8.9)	72 (4.2)	1,728 (100.0)	64	1,792
Others	127 (76.5)	13 (7.8)	140 (84.3)	12 (7.2)	14 (8.4)	166 (100.0)	18	184
Total	1,743 (75.9)	212 (9.2)	1,955 (85.2)	212 (9.2)	128 (5.6)	2,295 (100.0)	105	2,400

*Estimate of permanent residents who resided in Canada prior to their university appointment.

**Estimate of permanent residents who obtained their status in conjunction with their university appointment.

Table A-6

Legal Status of Newly Appointed Full-time University Teachers by Academic Rank, 1979-80

Rank	Canadian citizen	Permanent resident*	Sub-total	Permanent resident**	Employment permit	Total	Not reported	Grand total
Full professor	64 (62.1)	12 (11.7)	76 (73.8)	12 (11.7)	15 (14.6)	103 (100.0)	29	132
Associate professor	147 (68.4)	22 (10.2)	169 (78.6)	22 (10.2)	24 (11.1)	215 (100.0)	29	244
Sub-total	211 (66.3)	34 (10.7)	245 (77.0)	34 (10.7)	39 (12.3)	318 (100.0)	58	376
Assistant professor	638 (74.4)	83 (9.7)	721 (84.1)	83 (9.7)	53 (6.2)	857 (100.0)	67	924
Instructor/ Lecturer	510 (84.6)	34 (5.6)	544 (90.2)	34 (5.6)	25 (4.1)	603 (100.0)	31	634
Sub-total	1,148 (78.6)	117 (8.0)	1,265 (86.6)	117 (8.0)	78 (5.4)	1,460 (100.0)	98	1,558
Other	97 (78.2)	10 (8.1)	107 (86.3)	10 (8.1)	7 (5.7)	124 (100.0)	19	143
Total	1,456 (76.6)	161 (8.5)	1,617 (85.0)	161 (8.5)	124 (6.5)	1,902 (100.0)	175	2,077

*Estimate of permanent residents who resided in Canada prior to their university appointment.

**Estimate of permanent residents who obtained their status in conjunction with their university appointment.

Table A-7

Legal Status of Newly Appointed Full-time University Teachers by Academic Rank, 1980-81

Rank	Canadian citizen	Permanent resident*	Sub-total	Permanent resident**	Employment permit	Total	Not reported	Grand total
Full professor	68 (69.4)	8 (8.2)	76 (77.6)	8 (8.2)	14 (14.3)	98 (100.0)	22	120
Associate professor	116 (66.3)	22 (12.6)	138 (78.9)	21 (12.0)	16 (9.1)	175 (100.0)	27	202
Sub-total	184 (67.4)	30 (11.0)	214 (78.4)	29 (10.6)	30 (11.0)	273 (100.0)	49	322
Assistant professor	498 (74.1)	59 (8.8)	557 (82.9)	58 (8.6)	57 (8.5)	672 (100.0)	66	738
Instructor/lecturer	434 (85.8)	27 (5.3)	461 (91.1)	27 (5.3)	18 (3.5)	506 (100.0)	38	544
Sub-total	932 (79.1)	86 (7.3)	1,018 (86.4)	85 (7.2)	75 (6.4)	1,178 (100.0)	104	1,282
Other	83 (75.5)	8 (7.3)	91 (82.7)	7 (6.4)	12 (10.9)	110 (100.0)	25	135
Total	1,199 (76.8)	124 (7.9)	1,323 (84.7)	121 (7.8)	117 (7.5)	1,561 (100.0)	178	1,739

*Estimate of permanent residents who resided in Canada prior to their university appointment.

**Estimate of permanent residents who obtained their status in conjunction with their university appointment.

Table A-8

Legal Status of Newly Appointed Full-time University Teachers by Region, 1977-78 to 1980-81

Region	Canadian citizen	Permanent resident*	Sub-total	Permanent resident**	Employment permit	Sub-total	Total	Not reported	Grand Total
Atlantic									
1977-78	200	65.2	40	12.0	240	78.2	39	12.7	317
1978-79	227	76.2	29	9.7	256	85.9	38	9.4	305
1979-80	243	78.4	22	7.1	265	85.5	32	7.1	319
1980-81	224	74.9	27	9.0	251	84.0	27	9.0	302
Quebec English-speaking universities									
1977-78	84	58.7	18	12.6	102	71.3	18	12.6	114
1978-79	66	54.6	22	18.2	88	77.7	22	18.2	123
1979-80	54	48.2	20	17.9	74	66.1	19	17.0	114
1980-81	54	48.2	20	17.9	74	66.1	19	17.0	114
Quebec French-speaking universities									
1977-78	345	86.7	21	5.3	366	92.0	21	5.3	406
1978-79	320	87.4	18	4.9	338	92.4	17	4.6	373
1979-80	266	87.9	12	4.0	278	93.9	12	4.0	300
1980-81	266	89.9	12	4.0	278	93.9	12	4.0	300
Ontario									
1977-78	646	69.1	99	10.6	745	79.7	99	10.6	950
1978-79	584	74.5	72	9.1	661	83.6	71	9.0	804
1979-80	473	72.2	59	9.0	532	81.2	59	9.0	673
1980-81	564	75.1	57	7.6	621	82.7	57	7.6	763
Western									
1977-78	451	63.4	89	12.5	540	75.9	88	12.4	721
1978-79	516	69.6	81	10.9	597	80.6	81	10.9	750
1979-80	492	69.4	80	11.3	572	80.8	79	11.2	718
1980-81	463	69.3	67	10.0	530	79.3	67	10.3	677
Sub-total									
1977-78	1,726	69.2	267	10.7	1,993	79.9	265	10.6	2,538
1978-79	1,718	74.2	222	9.6	1,940	83.7	219	9.4	2,355
1979-80	1,528	73.4	193	9.3	1,721	82.7	191	9.2	2,124
1980-81	1,571	73.9	183	8.6	1,754	82.5	182	8.6	2,156
Other institutions									
1977-78	12	68.1	4	8.5	36	76.6	4	8.8	47
1978-79	39	86.7	2	4.4	41	91.1	2	4.4	45
1979-80	48	87.3	2	3.6	50	90.9	2	3.6	57
1980-81	42	85.7	3	6.1	45	91.8	3	6.1	49
Grand Total									
1977-78	1,758	69.2	271	10.7	2,029	79.9	269	10.6	2,585
1978-79	1,557	74.4	224	9.5	1,981	83.9	221	9.4	2,400
1979-80	1,526	71.8	195	9.1	1,771	82.9	193	9.0	2,181
1980-81	1,601	71.1	186	8.6	1,799	82.7	185	8.5	2,204

*Estimate of permanent residents who resided in Canada prior to their university appointment.

**Estimate of permanent residents who obtained their status in conjunction with their university appointment.

Note: For Quebec universities, as well as some other institutions, 1979-80 data has been substituted for 1980-81.

	Canadian	Employment Resident						Employment Permit			Total	
		1978-79	1979-80	1980-81	1978-79	1979-80	1980-81	1978-79	1979-80	1980-81		
Education	185 83.0	151 88.3	107 83.0	31 13.9	17 9.9	18 14.0	7 3.1	3 1.8	4 3.1	223 100.0	171 100.0	129 100.0
Fine and Applied Arts	107 73.8	64 66.0	66 68.8	29 20.0	26 26.8	21 21.9	9 6.2	7 7.2	9 9.4	145 100.0	97 100.0	96 100.0
Humanities	226 77.4	172 76.4	170 83.3	51 17.5	38 16.9	26 12.8	15 5.1	15 6.7	8 3.9	292 100.0	225 100.0	204 100.0
Social Sciences	536 75.0	394 74.3	301 75.2	133 18.6	92 17.4	65 16.2	46 6.4	44 8.3	34 8.5	715 100.0	530 100.0	400 100.0
Agriculture and Biological Sciences	58 62.4	69 75.8	47 78.3	27 29.0	19 20.9	11 18.3	8 8.6	3 3.3	2 3.3	93 100.0	91 100.0	60 100.0
Engineering & Applied Sciences	87 71.9	88 72.7	83 70.3	24 19.8	19 15.7	19 16.0	10 8.3	14 11.6	16 13.6	121 100.0	121 100.0	118 100.0
Health Sciences	125 84.5	104 83.2	100 85.5	19 12.8	18 14.4	13 11.1	4 2.7	3 2.4	4 3.4	148 100.0	125 100.0	117 100.0
Mathematics and Physical Sciences	115 77.7	101 78.3	63 72.4	20 13.5	14 10.8	9 10.3	13 8.8	14 10.8	15 17.3	148 100.0	129 100.0	87 100.0
Sub-total	1,439 76.3	1,143 76.8	937 77.4	334 17.7	243 16.3	182 15.0	112 6.0	103 6.9	92 7.6	1,885 100.0	1,489 100.0	1,211 100.0
Not Specified	304 74.1	237 77.4	228 75.8	90 22.0	54 17.7	53 17.6	16 3.9	15 4.9	20 6.6	410 100.0	306 100.0	301 100.0
Total	1,743 76.0	1,380 76.9	1,165 77.1	424 18.5	297 16.6	235 15.5	128 5.5	118 6.5	112 7.4	2,295 100.0	1,795 100.0	1,512 100.0

Table A-10

Legal Status of Newly Appointed Full-time University Teachers in Selected Disciplines,
Four Year Total (1977-78 to 1980-81)

Disciplines	Canadian Citizen	Permanent* Resident	Permanent* Sub-total	Permanent** Resident	Employment Permit	Total	Not Reported	Grand Total
History	108 (61.8)	9 (6.8)	117 (88.6)	9 (6.8)	6 (4.6)	132 (100.0)	8	140
Modern Languages	298 (81.4)	25 (6.8)	323 (88.2)	25 (6.8)	18 (4.9)	366 (100.0)	23	389
Philosophy	37 (74.0)	5 (10.0)	42 (84.0)	5 (10.0)	3 (6.0)	50 (100.0)	3	53
Commerce and Business Administration	380 (73.4)	51 (9.8)	431 (83.2)	51 (9.8)	36 (7.0)	518 (100.0)	46	564
Economics	156 (67.8)	19 (8.3)	175 (76.1)	19 (8.3)	36 (15.7)	230 (100.0)	35	265
Geography	56 (70.9)	7 (8.9)	63 (79.8)	8 (10.1)	8 (10.1)	79 (100.0)	3	81
Political Science	101 (82.1)	7 (5.7)	108 (87.3)	8 (6.5)	7 (5.7)	123 (100.0)	5	128
Psychology	176 (76.9)	22 (9.6)	198 (86.5)	22 (9.6)	9 (3.9)	229 (100.0)	18	247
Sociology	125 (76.7)	13 (8.0)	138 (84.7)	13 (8.0)	12 (7.3)	163 (100.0)	8	171
Agriculture	29 (78.4)	3 (8.1)	32 (86.5)	4 (10.8)	1 (2.7)	37 (100.0)	4	41
Engineering	195 (69.6)	25 (8.9)	220 (78.6)	25 (8.9)	35 (12.5)	280 (100.0)	20	300
Mathematics	120 (79.5)	7 (4.6)	127 (84.1)	8 (5.3)	16 (10.6)	151 (100.0)	34	185
Chemistry	67 (74.4)	4 (4.4)	71 (78.9)	5 (5.6)	14 (15.6)	90 (100.0)	14	104
Geology and Related	39 (65.0)	7 (11.7)	46 (76.7)	7 (11.7)	7 (11.7)	60 (100.0)	9	69
Physics	53 (84.0)	2 (3.2)	55 (87.3)	3 (4.8)	5 (7.9)	63 (100.0)	7	70

Country	Canadian Citizen		Permanent Resident		Employment Permit		Sub-total		N.R.	Total
	No.	%	No.	%	No.	%	No.	%		
Canada	1,571	98.0	(233)*		32	2.0	1,603	100.0	26	1,629
United States	155	41.6	148	39.7	70	18.8	373	100.0	38	411
United Kingdom	36	34.0	36	34.0	34	32.0	106	100.0	9	115
Other Commonwealth	7	25.9	9	33.3	11	40.7	27	100.0	3	30
Belgium/ France	14	46.7	8	26.7	8	26.7	30	100.0	2	32
Other Europe	20	44.4	11	24.5	14	31.1	45	100.0	3	48
Other	12	32.4	16	43.2	9	24.3	37	100.0	2	39
Sub-total	1,815	81.7	228	10.3	178	8.0	2,221	100.0	83	2,304
Not Reported	161		39		25		225		56	281
Total	1,976		267		203		2,446		139	2,585

* This figure has been added to the "Canadian citizen" category.

Table A-12

Country of Previous Employment of Newly Appointed Full-time
University Teachers by Legal Status,
1978-79

Country	Canadian Citizen No.	Canadian Citizen % (88.4)	Permanent Resident No.	Permanent Resident % (216)*	Employment Permit No.	Employment Permit % (21.5)	Sub-total No.	Sub-total % (77.5)	N.R.	Total
Canada	1,631	98.6			23	1.4	1,654	100.0	21	1,675
United States	141	49.3	110	38.5	35	12.2	286	100.0	29	315
United Kingdom	21	25.9	35	43.2	25	30.9	81	100.0	14	95
Other Commonwealth	18	50.0	10	27.8	8	22.2	36	100.0	4	40
Belgium/France	17	70.8	6	25.0	1	4.2	24	100.0	2	26
Other Europe	8	40.0	5	25.0	7	35.0	20	100.0	5	25
Other	10	30.3	15	45.4	8	24.2	33	100.0	5	38
Sub-total	1,846	86.5	181	8.5	107	5.0	2,134	100.0	80	2,214
Not Reported	113	70.0	27	16.8	21	13.0	161	100.0	25	186
Total	1,959	85.4	208	9.1	128	5.6	2,295	100.0	105	2,400

Country	Canadian Citizen		Permanent Resident		Employment Permit		Sub-total		N.R. No.	Total
	No.	%	No.	%	No.	%	No.	%		
Canada	1,353 (90.3)	98.0	(162)*		28 (24.6)	2.0	1,381 (79.5)	100.0	19	1,400
United States	96 (6.4)	46.2	77 (61.6)	37.0	35 (30.7)	16.8	208 (12.0)	100.0	40	248
United Kingdom	21 (1.4)	32.3	20 (16.0)	30.8	24 (21.0)	36.9	65 (3.7)	100.0	21	86
Other Commonwealth	9 (0.6)	39.1	9 (7.2)	39.1	5 (4.4)	21.7	23 (1.3)	100.0	10	33
Belgium/France	9 (0.6)	60.0	3 (2.4)	20.0	3 (2.6)	20.0	15 (0.9)	100.0	6	21
Other Europe	5 (0.3)	19.2	8 (6.4)	30.8	13 (11.4)	50.0	26 (1.5)	100.0	6	32
Other	6 (0.4)	30.0	8 (6.4)	40.0	6 (5.3)	30.0	20 (1.2)	100.0	7	27
Sub-total	1,499 (100.0)	92.3	125 (100.0)	7.7	114 (100.0)	7.0	1,738 (100.0)	100.0	109	1,847
Not Reported	119	72.6	35	21.3	10	6.1	164	100.0	66	230
Total	1,618	85.1	160	8.4	124	6.5	1,902	100.0	175	2,077

* This figure has been added to the "Canadian citizen" category.

Table A-14

Country of Previous Employment of Newly Appointed Full-time
University Teachers by Legal Status,
1980-81

Country	Canadian		Permanent		Employment		Sub-total No.	N.R. %	Total
	Citizen No.	%	Resident No.	%	Permit No.	%			
Canada	1,059 (88.0)	97.6	(44)*		26 (26.5)	2.4	1,085 (77.1)	100.0	37
United States	107 (8.9)	50.7	65 (61.9)	30.8	39 (39.8)	18.5	211 (15.0)	100.0	41
United Kingdom	13 (1.1)	29.6	20 (19.0)	45.4	11 (11.2)	25.0	44 (3.1)	100.0	14
Other Commonwealth	7 (0.6)	41.2	6 (5.7)	35.3	4 (4.1)	23.5	17 (1.2)	100.0	4
Belgium/ France	7 (0.6)	58.3	0 (0.0)	0.0	5 (5.1)	41.7	12 (0.8)	100.0	0
Other Europe	4 (0.3)	26.7	8 (7.6)	53.3	3 (3.4)	20.0	15 (1.1)	100.0	6
Other	7 (0.6)	30.4	6 (5.7)	26.1	10 (10.2)	43.5	23 (1.6)	100.0	7
Sub-total	1,204 (100.0)	85.6	105 (100.0)	7.5	98 (100.0)	7.0	1,407 (100.0)	100.0	109
Not Reported	109		26			19		154	69
Total	1,313		131			117		1,561	178
									1,739

* This figure has been added to the "Canadian citizen" category.

Table A-15

Universities which had a Sizable Group in the "Legal Status Not Reported" Category, 1977-78 to 1980-81

Institution	1977-78	1978-79	1979-80	1980-81
A	8 5.8	— 0.0	12 6.6	10 5.4
B	10 7.2	— 0.0	6 3.3	— 0.0
C	— 0.0	5 4.8	10 5.5	10 5.4
D	15 10.8	26 24.8	27 14.9	50 27.2
E	70 50.4	41 39.0	81 44.8	76 41.3
Sub-total	103 74.1	72 68.6	136 75.1	146 79.4
Other institutions	36 25.9	33 31.4	45 24.9	38 20.6
Total	139 100.0	105 100.0	181 100.0	184 100.0

Appendix B

The Demand for Management Faculty : A Case Study

As a pilot project, five tables have been prepared which deal specifically with the demand and supply of Ph.D.'s in Management and Administrative Studies. As was documented in a separate study by the author, Doctoral Business Programs and Students at Canadian Universities and the Demand for Management Faculty¹, the supply of Ph.D.'s from Canadian universities was inadequate with regard to the staffing needs of the management faculties. During the seventies, less than a dozen Ph.D.'s in this discipline were available each year (some of them foreign students who left Canada, others who already held permanent positions) (Table B-1). In contrast, on average, 200 new appointments were made annually, including inter-university transfers².

For a nine year period (1972-73 to 1980-81), the geographic origin of the first degree and citizenship has been developed. Two-thirds of these new appointees in Management and Administrative Studies were Canadian citizens during this period, and a slightly lower percentage (59.4) had received their first degree in Canada (Tables B-2 and B-3). Table B-4 gives the legal status of those full-time faculty members who were appointed between 1978-79 and 1980-81 indicating the increase in the Canadian citizenship category and the relative decline with permanent residence status. The previous employment sector of newly appointed full-time university teachers show that, on average, 46.4%

1 A background report to the Annual Meeting of the Administrative Sciences Association of Canada (May 26, 1980, Montreal) pp. 114.

2 In spite of this expansion, the student/teacher ratio in this particular discipline has increased substantially from 34.0 to 38.0 whereas for other disciplines it has remained stable (16.0).

were teaching at another university, either in Canada or abroad, prior to their present appointment, and a sizable group has come from the private and government sectors (Table B-5).

Table B-1

Management and Administrative Studies Ph.D.'s Granted
at Canadian Universities Related to the Number of New
Appointments Made, 1970-71 to 1980

Year	Ph.D. degrees granted	New appointments made*
1970-71	4	125
1971-72	6	138
1972-73	10	157
1974	10	209
1975	19	193
1976	12	210
1977	10	206
1978	19	230
1979	18	200 **
1980	17**	190**

* New appointments for the following year.

** Estimated

Geographic Origin of Citizenship of Newly Appointed Full-time University Teachers in Management and Administrative Studies, 1972-73 to 1980-81

Year	Canada	United States	United Kingdom	Other Commonwealth	France and Belgium	Other Europe	Other	Total
1972-73	64.9 (59.1)	20.7 (17.9)	3.6 (8.9)	0.9 (3.7)	0.9 (3.0)	1.8 (3.6)	7.2 (3.7)	138 (100.0)
1973-74	67.2 (63.3)	22.4 (16.9)	0.0 (7.7)	0.7 (3.6)	3.7 (1.8)	1.5 (3.8)	4.5 (2.9)	157 (100.0)
1974-75	66.0 (62.4)	19.1 (17.6)	4.6 (8.6)	4.6 (3.1)	1.0 (2.1)	1.0 (2.8)	3.6 (3.4)	209 (100.0)
1975-76	60.0 (64.2)	21.1 (16.1)	4.9 (7.1)	2.2 (3.9)	3.8 (2.0)	2.2 (3.1)	5.9 (3.6)	193 (100.0)
1976-77	58.2 (65.3)	17.8 (14.9)	7.7 (7.2)	4.3 (4.0)	4.8 (2.0)	1.4 (2.7)	5.8 (3.9)	210 (100.0)
1977-78	65.6 (69.2)	13.1 (13.3)	5.1 (7.2)	4.0 (2.7)	4.0 (2.0)	2.5 (2.3)	5.6 (3.3)	206 (100.0)
1978-79	69.6 (72.6)	11.7 (10.4)	3.9 (6.4)	5.2 (2.6)	2.6 (1.5)	1.3 (2.3)	5.6 (4.1)	230 (100.0)
1979-80 *	64.0 (70.1)	15.3 (10.6)	4.8 (6.8)	3.2 (3.2)	3.7 (1.1)	1.1 (2.5)	7.9 (5.6)	189 (100.0)
1980-81 *	68.3 (69.3)	11.0 (12.7)	5.5 (5.6)	4.1 (2.8)	0.0 (0.5)	0.7 (2.1)	10.3 (7.0)	145 (100.0)
Nine year total	64.9 (66.2)	16.9 (14.5)	4.5 (7.3)	3.2 (3.3)	2.7 (1.8)	1.5 (2.8)	6.3 (4.2)	1,677 (100.0)

*Data are incomplete as some universities have not yet reported.

Table B-3

Geographic Area of First Degree of Newly Appointed Full-time University Teachers in
Management and Administrative Studies, 1972-73 to 1980-81

Year of Appointment	Canada	United States	United Kingdom	Other Commonwealth	France and Belgium	Other Europe	Other Countries	Sub-total	Not reported	Total
1972-73	78 57.4	34 25.0	6 4.4	3 2.2	3 2.2	3 2.2	9 6.6	136 100.0	2	138
1973-74	96 61.5	42 26.9	3 1.9	2 1.3	6 3.8	3 1.9	4 2.6	156 100.0	1	157
1974-75	124 62.0	44 22.0	12 6.0	9 4.5	2 1.0	2 1.0	7 3.5	200 100.0	9	209
1975-76	102 54.3	49 26.1	8 4.3	8 4.3	9 4.8	2 1.0	10 5.3	188 100.0	5	193
1976-77	109 52.9	40 19.4	19 9.2	9 4.4	10 4.8	2 1.0	17 8.3	206 100.0	4	210
1977-78	121 61.4	31 15.7	16 8.1	7 3.6	8 4.1	5 2.5	9 4.6	197 100.0	10	207
1978-79	149 66.8	32 14.4	7 3.1	12 5.4	4 1.8	3 1.4	16 7.2	223 100.0	7	230
1979-80*	102 54.6	36 19.2	14 7.5	6 3.2	10 5.4	4 2.1	15 8.0	187 100.0	2	189
1980-81*	86 63.2	21 15.4	9 6.6	10 7.4	0 0.0	1 0.7	9 6.6	136 100.0	9	145
Nine year total	967 59.4	329 20.2	94 5.8	66 4.0	52 3.2	25 1.5	96 5.9	1,629 100.0	49	1,678

*Incomplete information; some universities, primarily in Quebec, are missing.

Previous Employment Sector of Newly Appointed Full-time University Teachers in Management and Administrative Studies, 1972-73 to 1980-81

Employment sector	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80*	1980-81*	Nine year total
University	41	56	80	101	84	101	71	61	47.3	695
	36.6	37.1	44.4	58.4	56.2	44.4	42.0	42.0	46.4	46.4
Other Education	3	7	9	5	5	5	2	2	2	43
	2.7	4.6	5.0	2.9	2.8	2.6	1.2	1.2	2.9	2.9
Student	39	55	42	34	26	41	43	28	355	
	34.8	36.4	23.3	19.6	14.6	21.7	21.7	21.7	23.7	23.7
Health Sciences	-	-	-	-	1	3	1	3	0	8
	-	-	-	-	0.6	1.6	0.5	1.8	0.0	0.5
Government (including Military)	6	3	11	7	11	15	16	14	6	89
	5.4	2.0	6.1	4.0	6.2	7.9	7.4	8.3	4.6	5.9
Industry and Self-employment	17	27	36	24	32	32	38	32	31	270
	15.2	17.9	20.0	13.9	18.0	16.9	17.5	19.5	24.0	18.0
Other	6	3	2	2	3	9	9	3	1	38
	5.4	2.0	1.1	1.2	1.7	4.8	4.2	1.8	0.8	2.5
Sub-total	112	151	180	173	178	189	217	169	129	1,498
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Not reported	26	6	29	20	32	17	13	20	16	179
Total	138	157	209	193	210	206	230	189	145	1,677

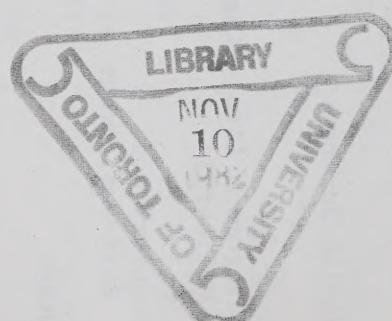
* Incomplete information; some universities, primarily in Quebec, are missing.

Table B-5

Legal Status of Newly Appointed Full-time University Teachers
in Management and Administrative Studies, 1978-79 to 1980-81

Legal Status	1978-79	1979-80*	1980-81*
Canadian	160 (71.1)	121 (73.3)	99 (77.3)
Permanent residence	53 (23.6)	30 (18.2)	19 (14.8)
Employment permit	12 (5.3)	14 (8.5)	10 (7.8)
Sub-total	225 (100.0)	165 (100.0)	128 (100.0)
Not reported	5	24	17
Total	230	189	145

*Incomplete information; some universities, primarily in Quebec, are missing.



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137,82

